

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

1. (Currently amended): A worked molybdenum-alloy material, ~~subjected to nitriding, which has~~ having high corrosion resistance, high strength, and high toughness, comprising:
a recrystallized structure inside the worked molybdenum-alloy material; fine nitride particles
a nitride-particle-dispersed layer on the recrystallized structure, formed by subjecting internal nitriding of a nitride-forming-metal element dissolved to form a solid solution in a molybdenum matrix in an untreated worked molybdenum-alloy material, ~~to internal nitriding, the fine nitride particles being dispersed inside the worked molybdenum-alloy material subjected to nitriding in a worked structure or recovered structure on the recrystallized structure; and~~
a molybdenum nitride layer on the nitride-particle-dispersed layer, the molybdenum nitride layer having a thickness of 3 μ m or less, the molybdenum nitride layer comprising one or more selected from δ -MoN, γ -Mo₂N, and β -Mo₂N, the molybdenum nitride layer being formed by subjecting external nitriding of a worked structure or a recovered structure at the surface of the untreated worked molybdenum-alloy material to external nitriding, the molybdenum nitride layer being provided at the surface of the worked molybdenum-alloy material subjected to nitriding.

2-4. (Cancelled).

5. (Currently amended): A method for manufacturing a worked molybdenum-alloy material ~~subjected to nitriding according to Claim 1 or 2~~, comprising the steps of: ~~subjecting~~ internally nitriding an untreated worked ~~alloy~~ molybdenum-alloy material in which at least any one of titanium, zirconium, hafnium, vanadium, niobium, and tantalum is dissolved to form a solid solution in a molybdenum matrix ~~[[to]]~~ through a multi-step internal nitriding treatment including ~~a stepwise increase~~ at least three-step increases of ~~[[the]]~~ treatment temperature, and then ~~subjecting~~ externally nitriding the worked alloy material ~~[[to]]~~ through an external nitriding treatment at 900 °C or lower so as to form a molybdenum nitride layer of 3 μm or less.

6. (Original): The method for manufacturing a worked molybdenum-alloy material subjected to nitriding according to Claim 5, wherein the internal nitriding treatment is performed with a nitrogen gas, and then the external nitriding treatment is performed with an ammonia gas.

7. (New): A worked molybdenum-alloy material high corrosion resistance, high strength, and high toughness, comprising:

a worked structure without recrystallization inside the worked molybdenum-alloy material;

a nitride-particle-dispersed layer, on the recrystallized structure, formed by internal nitriding of a nitride-forming-metal element dissolved in a molybdenum matrix in an untreated worked molybdenum-alloy material, fine nitride particles being dispersed in a worked structure

or recovered structure on the recrystallized structure; and

a molybdenum nitride layer with a thickness of 3 μm or less, the molybdenum nitride layer comprising one or more selected from $\delta\text{-MoN}$, $\gamma\text{-Mo}_2\text{N}$, and $\beta\text{-Mo}_2\text{N}$, the molybdenum nitride layer being formed by external nitriding of a worked structure or a recovered structure at the surface of the untreated worked molybdenum-alloy material.